

TAC ATTACK

TAC Attack

November 1979

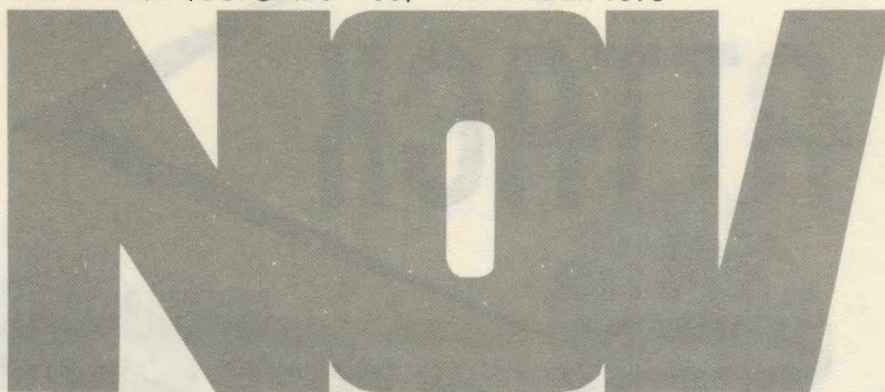
NOVEMBER 1979

Night Work ...Pg 10

NIGHT WORK
...Pg 10

Garcia





READINESS IS OUR PROFESSION

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Angle of Attack

task saturation

When the computer was invented, our capability to store, recall, collate, and otherwise utilize information was greatly expanded. The advances in this and associated fields of data processing have been phenomenal. The future in this area appears to be limited only by one's imagination. Our own human capability to process data has not come close to advancing at this remarkable pace.

We are, after all, human beings with definite, definable capabilities. The very essence of our capabilities also serves to define our limitations. One set of limitations which each of us has is imposed by our sensory capabilities. The senses of hearing, sight, smell, taste, and touch continually send messages to the brain, messages that require action, storage, collation, or thought. Pure physical reactions ordered by the brain are easy--almost automatic. Actions requiring judgement are much more difficult, especially if there is an excess of inputs.

We, as human beings, can only handle a finite number of sensory inputs. Through continuous

training, we are able to increase our ability to accept more tasks. But our increasing capability can only go so far, and we will reach a maximum level. When that level is exceeded, one or more inputs will go unnoticed, unheard, and will not be acted upon. If this happens at a critical time, an incident or accident can result.

Only in the past several years have we begun to effectively examine the problems of task saturation, and we have only scratched the surface.

We are all subject to physical and mental limits. We need to know what these limits are--for both ourselves and those we work and fly with--before we can hope to eliminate accidents caused by "task saturation."

Richard K. Ely

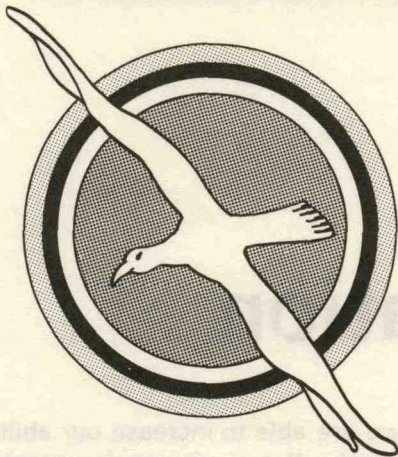
RICHARD K. ELY, Colonel, USAF
Chief of Safety

TAC's

NEWEST MEMBERS

PART II

In last month's issue, we said hello to the active duty Air Defense units which were incorporated into Tactical Air Command. This month, we feature the new TAC-gained Air National Guard air defense units. All of the TAC-gained interceptor units have a full time alert commitment at their location.



101 FIS/102 FIW, Otis AFB, MA

The 101 FIS originated shortly after WWII when the 101st Observation Squadron, Massachusetts National Guard, was activated in 1921 at Boston. In 1927 the unit provided facilities to Charles Lindberg to prepare the Spirit of St. Louis for its historic flight to Paris. The unit was called to active duty during WWII and served in Europe. In 1946 the unit was reformed and reopened operations at Boston's Logan Field which it had built earlier. The 101 FIS saw active duty during the Korean conflict and deployed to Europe during the Berlin crisis. In 1962 the unit returned to Boston with a tactical mission, but in 1968 it moved to its present home at Otis AFB. In 1971 the 101 FIS, under the 102 FIW, was reassigned an air defense mission and equipped with F-106s. The unit has flown a number of aircraft throughout its history including P-47s, F-51s, F-84s, F-94s, F-86s, and F-100s. Today the unit is flying F-106s.

111 FIS/147 FIG, Ellington AFB, TX

The 111 FIS was originally activated as the 111th Observation Squadron in 1929 at Houston, Texas, flying JN4-H "Jennies." During WWII the squadron was called to active duty and saw considerable action throughout the European theater. At the end of WWII the unit moved back to Ellington AFB, Texas, and took up an air defense mission equipped with F-51s. During the Korean conflict the unit transitioned to F-84s and served the UN Forces flying out of Taegu, Korea, as a fighter bomber squadron. It returned to Houston at the close of the war and once again assumed an air defense mission with F-80s. In 1960 the squadron transitioned into F-102s, and in 1970 it became the training unit for F-102 pilots. In 1971 the squadron received F-101Bs and assumed an additional role of training "Voodoo" aircrews. Today the 111 FIS, under the 147 FIG, continues an air defense mission in F-101s.





119 FIS/177 FIG, Atlantic City IAP, NJ

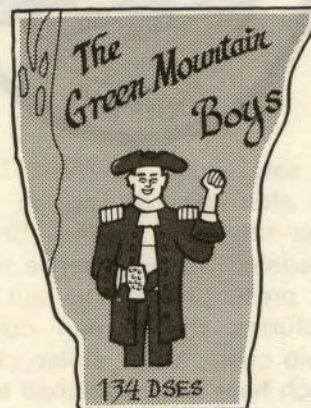
The 119 FIS was initially activated in 1928 as an observation squadron. After seeing service during WWII, the unit was assigned an air defense mission in 1946. The unit had a TAC mission from 1962 to 1972 and saw action during the Vietnam conflict. The unit has flown P-47s, P-51s, F-86s, F-84s, F-100s, and F-105s. In 1972 the 119 FIS, under the 177 FIG, received F-106s and was reassigned to an air defense mission. Today the unit continues this mission in the Delta Dart.



123 FIS/142 FIG, Portland IAP, OR

The 123 FIS was initially formed in 1941 at Portland, Oregon, and was equipped with L-1, BC-1A, and O-47 aircraft. It flew submarine patrol flights off the West Coast during the early stages of WWII. Later, after receiving P-38s, the squadron flew reconnaissance missions out of India and China as the 35th Photographic Reconnaissance Squadron. After WWII the unit was redesignated the 123d Fighter Squadron

and equipped with F-51s, taking up an air defense mission back at Portland. It was called to active duty during the Korean conflict serving under the Western Air Defense Force. In 1952 the unit was returned to Oregon state control and continued its air defense mission. Aircraft that have been flown by the 123 FIS include F-86s, F-94s, F-89s, and F-102s. Today the 123 FIS, under the 142 FIG, maintains an air defense mission in F-101Bs.



134 DSES/158 DSEG, Burlington IAP, VT

The 134th Defense Systems Evaluation Squadron was activated in 1946 as the 134th Fighter Squadron and was assigned an air defense mission with P-47s at Burlington, Vermont. It was called to active duty during the Korean conflict and maintained alert at Burlington. The unit has maintained an air defense mission throughout its history, flying nearly all the fighter interceptors in the inventory: F-51s, F-94s, F-89s, and F-102s. In 1974 the unit's mission changed somewhat from that of the "good" guys to "bad" guys. The 134 DSES transitioned into EB-57 Canberras and became a target force which has provided valuable ECM training to interceptor aircrews throughout the world. Today, the 134 DSES, under the 158 DSEG, remains the only U.S. unit still flying Canberras providing targets for training.



TAC's NEWEST MEMBERS

136 FIS/107 FIG, Niagara Falls IAP, NY

The 136 FIS, "New York's Finest," was initially formed in 1942 as the 339th Bomb Group



(Dive) and saw action in WWII. The unit was deactivated after the war, but in 1946 it was reformed as the 10th Fighter Group, and in 1948 it assumed an air defense mission in P-47s at their present home. The unit has seen active duty during the Korean conflict, Berlin crisis, Pueblo crisis, and Vietnam conflict. Other aircraft which have been assigned to the unit include P-51s, F-94s, F-86s, and F-100s. In 1971 the 136 FIS, under the 107 FIG, received F-101Bs and, since then, has continued its outstanding record in air defense with the Voodoos.



159 FIS/125 FIG, Jacksonville IAP, FL

The 159 FIS was initially activated in 1947 at Jacksonville, Florida, with F-51s. A year later it received F-80s. The 159 FIS was called to active duty during the Korean conflict and deployed to Misawa, Japan. The unit returned to Jacksonville in 1952 and resumed its air defense mission in F-51s. During its history, besides the F-51s and F-80s, the unit has flown F-86s, F-84s, F-102s, and a number of support aircraft. In 1974 the 159 FIS, under the 125 FIG, converted to the F-106 which it maintains alert with today.

171 FIS/191 FIG, Selfridge ANGB, MI

The 171 FIS began in 1925 when the 107th Observation Squadron, Michigan National Guard, was formed at Detroit. In 1927 the unit began flying "Jennies" and later O-38s and O-47s during the 1930s. The unit was called to active duty and served in Europe during WWII flying F-51s. The unit returned to Michigan in 1945 and was designated the 171st Fighter Squadron. The unit was recalled to active duty during the Korean conflict and trained pilots in F-84s and F-86s at Luke AFB, Arizona. The unit returned to Michigan in 1954 and resumed an air defense mission along with its sister 107 FIS under the 127 FIW. In 1958 the unit assumed a



tactical mission and later a reconnaissance mission. The 171 FIS, under the 191 FIG, was reassigned an air defense mission in 1972 and was equipped with F-106s. The unit has flown a number of aircraft including RF-84s, F-89s, and RF-101s. In 1978 the 171 FIS, under the 191 FIG, transitioned into F-4Ds.



178 FIS/119 FIG, Hector Field, Fargo, ND

The 178 FIS "Happy Hooligans" located at Hector Field, Fargo, North Dakota, was formed in 1947. It began its air defense mission flying

F-51 Mustangs. Since those beginnings, the unit has transitioned through nearly all of the fighter interceptors in the inventory. It has flown F-94s, F-89s, F-102s, and F-101s. Today, the 178 FIS, under the 119 FIG, maintains its air defense alert in F-4Ds. It was the first ANG unit to assume a dedicated air defense mission with F-4s and has continued its outstanding record.



186 FIS/120 FIG, Great Falls IAP, MT

The 186 FIS was initially organized in 1947 at Great Falls, Montana. It was equipped with F-51 aircraft and had an air defense mission. During the Korean conflict the unit was called to active duty and served at Moody AFB, Georgia, and George AFB, California. Returning to Great Falls in 1953, it maintained a tactical mission until 1956 with F-86 aircraft. At that time it transitioned to F-94s and F-89s and resumed an air defense mission. The unit began flying F-102s in 1966, and in 1972 transitioned into F-106s--the first ANG unit to do so. Today the 186 FIS, under the 120 FIG, continues this mission.



194 FIS/144 FIW, Fresno ANGB, CA

The 194 FIS was initially activated in 1949. It had been a part of the 144th Fighter Interceptor Group stationed at Oakland Airport under the 61st Fighter Wing. In 1955 the 194 FIS moved to its present home at Fresno, California. Since its formation, the unit has flown F-51s, F-86s, and F-102s. Today the 194 FIS, under the 144 FIW, continues an outstanding air defense tradition with F-106 Delta Darts.

WE GOOFED. In last month's issue, we listed the active duty air defense units which were being incorporated into TAC. In that list we omitted one of the active duty squadrons because we didn't know they existed. Our sincere apologies to the men and women of the 46 FTS. Here's their story.



46 FTS, Peterson AFB, CO

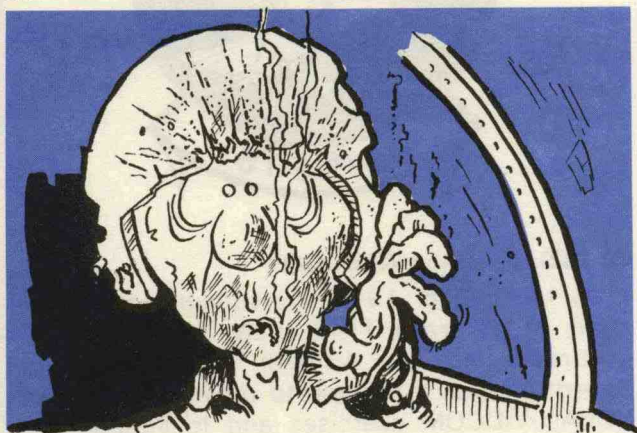
On 14 October 1974, the squadron was activated at Peterson Field (now Peterson AFB), Colorado, as the 4600th Flying Training Squadron, with a mission to provide targets for NORAD/ADCOM exercises and to support the Air Force Academy Airmanship Programs. In April 1975, the squadron was redesignated the 46th Flying Training Squadron. Aircraft flown by the squadron were the T-33, T-37, U-4, and the UV-18B which replaced the U-4 in support of the USAFA parachuting programs. Currently, the squadron flies the venerable T-33 in support of NORAD air defense exercises throughout the CONUS and Canada.

TIPS

A poor preflight could mean no postflight.

SMOKE GETS IN YOUR EYES

During a pilot proficiency flight in another command, the pilot in the back seat removed his oxygen mask. The airplane was on final approach and the intercom was on "hot mic," so he stuffed one of his gloves in the mask to hold down the noise. But he didn't turn the oxygen off.



The pilot leaned back and decided to light up a cigarette. Unfortunately, the cigarette wasn't the only thing that got lit up! A flash fire burned the mask, glove, and pilot's right hand.

Fortunately, the pilot suffered only second degree burns to his right palm and wrist. Now, for you guys who don't think you can wait until landing for a cigarette, do you think this will help? And how about washing the grease out of the gloves?

...interest items, mishaps with morals, for the TAC aircrewman

F-4 REVERSE TRANSFER

The Phantom arrived on initial with 3000 lb of fuel. Landing and dearm were normal; but as the pilot taxied to the parking area, he noted a rapid decrease in the fuel tape indicator. The right engine was shut down with 100 lb remaining; and as the aircraft entered the chocks, the left engine flamed out. Approximately 2000 lb of fuel had transferred from the fuselage cells back into the external tanks.

The defuel valve was the culprit. A wire to the closed side of the valve was disconnected from the cannon plug pin. With the defuel valve open and weight on the gear, fuel will flow back into the external tanks under 30 psi from the boost pumps. The same thing would happen in flight with the in-flight refueling door open.

The defuel valve is still not "Murphy proof," and reverse transfer can occur if things go wrong. If you get reverse transfer in flight, here's what you can do to help yourself:

1. Close the IFR door.
2. Turn the external transfer switch off.
3. Select "internal only" on the refuel select switch.
4. Pull the boost pump circuit breakers (LH only on AC 68-495 and up).
5. Land at the nearest suitable airfield, cause you're running on internal fuel only.

GOTCHA !

The F-4 was returning from an exercise mission after both generators had failed. The crew regained use of the left generator but had problems with aircraft handling due to the lack

of stab augs and no-flaps. The pilot planned a flat approach with an approach-end BAK-12 engagement.

The pilot was not aware that the MA-1A was disconnected and lying across the overrun, or that the BAK-9 was connected and in place 45 feet short of the threshold. So, on his approach, the tailhook cut through the MA-1A and caught the BAK-9 cable. At this time the aircraft was still 6-12 inches in the air.

The aircraft then touched down on the runway and pulled the cable out about 400 feet before it failed. The Phantom continued down the runway and contacted the BAK-12 with the BAK-9 cable still engaged in the hook shoe--the BAK-12 cable failed almost immediately. The pilot brought the aircraft to a safe stop on the runway.

It is an accepted procedure to leave overrun cables and barriers connected or laying across the approach-end of active runways. If you don't want them in your way, you should notify the tower in enough time to have the cables removed. At the very least, you should know where all the cables are--not just the one you intend to use.

One other note--the BAK-9 is not compatible with the F-4 for approach-end arrestments. The combination of gross weight and speed will ruin the barrier as it did in this case.

GOTCHA AGAIN !

When you have a problem with your aircraft, thinking too fast can get you in almost as much trouble as not thinking at all. . .

The aircraft was on PAR final for a planned low approach. After the flaps were lowered, the crew noticed that it took almost full left stick to maintain wings level. Suspecting split flaps, the pilot raised the flaps, but still noticed an excessive amount of lateral trim. The crew declared an emergency and elected to continue the approach to a full-stop landing.

Meanwhile at the aerodrome, midfield cable engagement recoveries were being made due to the runway being wet. Since the aircraft was a planned low approach in sequence with recovering aircraft, the barrier crew didn't have enough time to reset the BAK-12 for the emergency aircraft. The tower notified the crew of the loose cable; and they decided to land and lower the hook, once past the midfield cable, and take the departure-end cable.



The pilot touched down at 180 KIAS and became preoccupied with the landing roll. It seemed to take forever to reach the midfield cable, and the pilot misidentified the midfield cable as the departure end one and lowered his hook. The cable snapped almost immediately, damaging the stabilator. Thinking he had missed the cable, the pilot selected full AB for a go-around.

Almost immediately after liftoff, the hook engaged the departure-end cable and the aircraft came to a rather abrupt halt in the overrun with the MA-1A wrapped around the nose. (The pilot did pull the go levers out of AB as things slowed down.)

Very few emergencies require an immediate, gotta-land-now approach. Having all your ducks lined up is a lot better than what happens if you try to go too fast--and miss something.



**By Capt Pete O'Day
1 SOW/PA**

"Our Hornet escort just checked in--they're standing by if things get hot."

"Tracers, small arms, four o'clock--no threat."

"I have intermittent strobes at two o'clock--keep her low on the trees."

It's a good night, scattered middle clouds and clear half-moon. The helicopter maneuvers gently at treetop level, rising and falling as the pilots use the terrain for concealment. It is not visible in the darkness. No exterior lights are on, the cockpit is dark.

"Come left five, we're looking for big rocks in the river at twelve."

"Small arms fire at three--shooting at the sound--they can't find us."

"Two minutes out from Foxtrot."

"Should be power lines in 20 seconds."

"Tower at one."

"Coming right."

One hour prior, an enemy radar site disappeared in an explosion. The special forces team has completed its mission. Twelve men are now moving carefully and swiftly toward a point identified by eight digit coordinates. So was the CH-3E. Chances are things will not remain

NIGHT WORK

quiet--if the enemy finds the team, the night could get exciting. The CH-3E had the task of getting the team out--from deep in enemy territory.

"One minute to Foxtrot. Team call sign: Cougar. The team will authenticate FE with PA. Heading's good, instruments are good."

"Still no concentrated fire on us--random--they can't see us."

How do we make this mission happen? We know the enemy threat--tough, deep, and sophisticated. However, we are keenly aware of its limitations; we use them. Radar is subject to line of sight and ground clutter problems. Standard optics don't fare too well at night. The tactical solution is obvious. Fly low, hide behind trees and rocks; fly at night, using the darkness to advantage. Obvious? Yes. Easy? It can be.

The "Star Wars" look-alikes in the accompanying photographs are crew members of the 20th Special Operations Squadron of the 1st Special Operations Wing at Hurlburt Field, Florida. Their job is unconventional warfare, a joint force-multiplier that depends on a high level of training, planning, and innovation to achieve success. Success, in this business, is measured by getting in (and out) of enemy territory undetected, unharmed, and with a full complement of crew and passengers. The 20 SOS is charged with that concise mission.

Their helicopters, CH-3Es and UH-1Ns, are

relatively unsophisticated, low and slow, machines that hold no surprises or answers. How to beat the threat then? The answer is not a new one--good people, thorough training, and a lot of "can do" attitude. Add a device called Night Vision Goggles (NVG) to the "advantages" of low speed machines and the answer begins to appear. Not new, but it works, it's simple, it's cheap, and it's here.

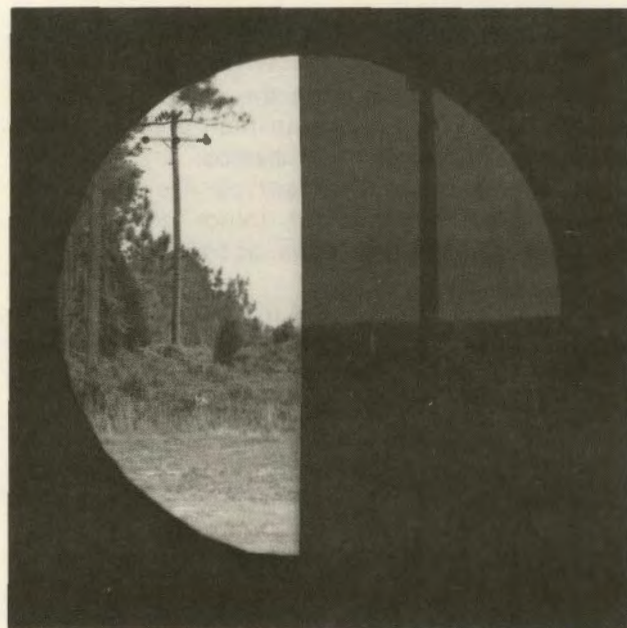
The NVGs (officially AN-PVS-5) are light amplification devices fitted into a battery-powered unit consisting of two monocular assemblies. The goggles are fitted to a standard Air Force helmet and weigh 28 ounces. Providing passive vision at night, the NVGs amplify existing astral illumination (starlight and/or moonlight) giving the pilot and crew the ability to discriminate obstacles and terrain features during the hours of darkness just as they would in the daytime.

The world is seen through a 40° field of view, as with binoculars. Images are sharp and clear. Depth perception is good in flight at 200 feet above ground level (AGL) and below. Most pilots feel comfortable flying at very low altitudes, due to increased clarity of the terrain. Prominent terrain features are recognizable at up to two miles. Depth of perception and resolution allow crews to perform all tactical maneuvers exactly as they would in the daytime. Defeat the threat--fly at night, but do it very low level and hide behind those rocks and trees.

There are specific steps in preparing for a night flight with NVGs, but it is important to emphasize that normal flying procedures and techniques are not changed--only new ones added that are required for effective employment of



Capt Pete O'Day
is this month's
Fleagle T-shirt winner

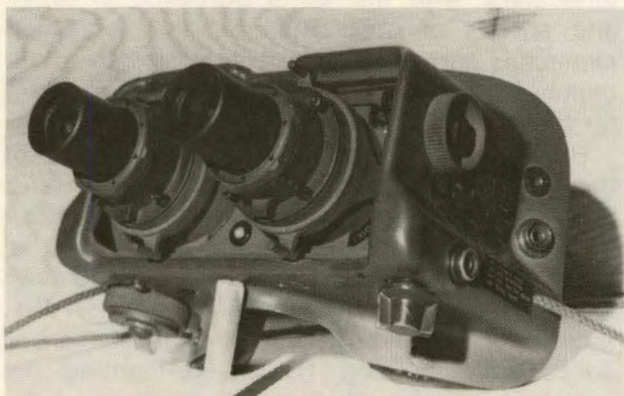


LEFT- A night view through NVGs.

RIGHT- A night view unaided by NVGs.



A 20 SOS "GREEN HORNETS" UH-1N Pilot
wearing NVGs.



Night Vision Goggles (NVG)

NIGHT WORK

NVGs. Since the copilot is the only one who will have access to a map for navigation, special attention is paid to planning the route and marking the map. The entire four-man crew must be familiar with turnpoints, hazards, and threats. Next, the goggles themselves are checked. Lenses are cleaned and minor adjustments made for comfort and focus, accommodating individual differences.

The goggles are checked in a dark room and a spare battery is tucked into the flight suit sleeve pocket. Due to the light amplification abilities of the NVGs, no aircraft lighting is used. Lights that routinely illuminate during flight (landing gear, aux fuel low, and AFCS) are covered with tape. (A small hole or slit is used to allow sufficient light for identification.)

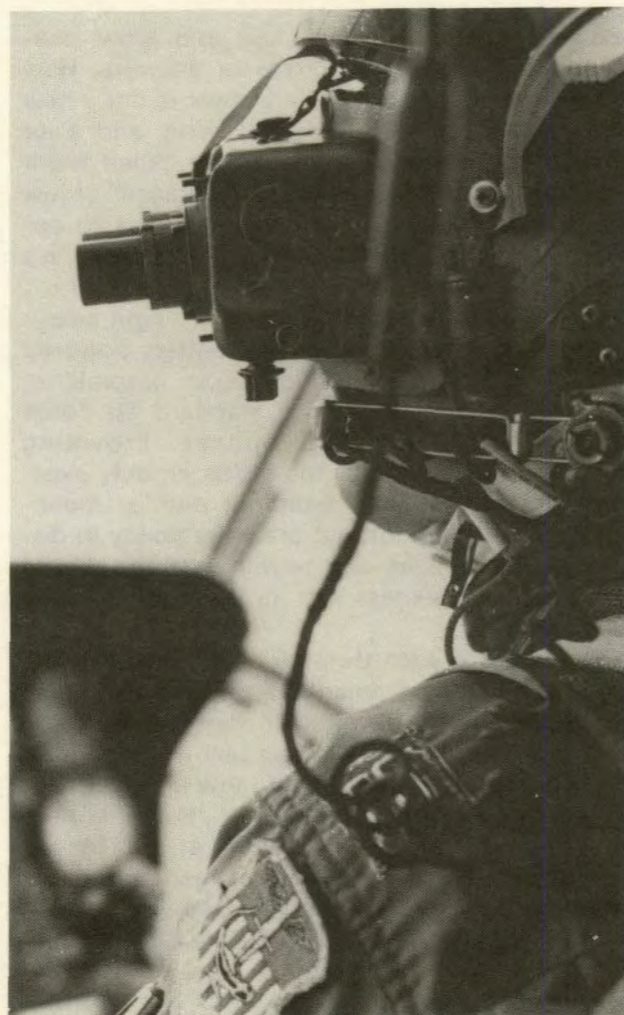
Cockpit and instrument lights are turned on, then all light circuit breakers are pulled. Effectively, there is no light in the aircraft; the crew doesn't need it, and the enemy is denied lights for acquisition.

CREW DUTIES AND RESPONSIBILITIES

All duties remain the same. However, crew coordination becomes extremely important. For example, the pilot can see the altimeter, air-speed indicator, torque gauge, and triple tach (engines and rotor RPM) with enough accuracy to discriminate nominal readings (airspeed 90-100 knots). He cannot, however, clearly read the smaller engine instruments or RMI markings; these become the copilot's responsibility. En-route navigation is accomplished by the copilot giving instructions, "turn right," "turn left," "roll out," much like a no-gyro GCA. The pilot maintains constant airspeed and terrain clearance. The copilot navigates, directs course changes and corrections, and monitors aircraft performance.

Flight mechanics or aerial gunners in the cabin verify navigation, operate weapon systems, and provide normal clearance information for confined area operations. NVGs provide normal clearance information for confined area operations. NVGs provide the capability; training and crew coordination translate that capability into safe and effective missions.

As mentioned previously, the night vision goggles provide a 40° field of vision to the crew



The NVGs, in general use by US Army COBRA aircrews.

member. What one sees is a circle, like using binoculars, with the world portrayed in green and shades of grey. This 40° field of vision eliminates part of the peripheral vision that helicopter crew members are accustomed to using for flight.

How does this loss affect the safe operation of the aircraft? Not at all. The crew compensates for lack of peripheral vision by head movements. You must increase your "field of scan." That is, the crew members move their heads to perceive what they normally would without NVGs. Increasing the field of scan is the last element of successfully utilizing NVGs. Pre-flighting the goggles, preparing the aircraft, solid crew coordination and team work, and head movement combine to give a crew the ability to see and employ practiced low level tactics at night. ➤



AIRCREW of DISTINCTION

On 19 July 1979, First Lieutenant James F. Holler departed Langley Air Force Base, Virginia, in an F-15B on a 2 vs 2 Air Combat Training sortie. Approximately 30 seconds after takeoff, cabin pressurization was lost followed shortly by a master caution and left generator lights. Lieutenant Holler cycled the generator switch and also cycled the air source knob in an attempt to regain cabin pressurization and cockpit air conditioning that was now also noticed to be missing. Neither action had any effect on the generator or Environmental Control System. Lieutenant Holler declared an emergency, advised his wingman of the problem, and turned onto the radar downwind in preparation for a straight-in landing. The radar and RWR were turned off to preclude possible heat damage although the ECS light had not illuminated. The emergency vent handle was also pulled to provide relief in the now very warm cockpit. As the aircraft approached a five mile final, the airframe began to violently shake. Lieutenant Holler noticed that both engine ramp systems were cycling full up and down at approximately two cycles per second. The demand on the utility hydraulic system was such that pressure fluctuated between 0 and 3000 PSI. Lieutenant Holler rapidly selected the emergency ramp position which stopped the cycling. As the ramps moved to the full up position and utility hydraulic pressure reached 3000 PSI, an uncommanded



1Lt James F. Holler
71 TFS/1 TFW
Langley AFB, VA

roll to the left to 30-45 degrees of bank occurred. This roll was quickly corrected and with less than two miles to landing, Lieutenant Holler was forced to decide between landing or going around. A quick assessment of aircraft control was made, and Lieutenant Holler safely landed the aircraft.

Investigation revealed a power supply problem to the Environmental Control System which allowed water to be sprayed into the avionics bays. Subsequently, a power failure occurred to the left generator control unit, left and right air inlet controllers, in addition to other substantial damage to the avionics. Had flight continued, loss of the right generator control unit and the emergency generator control unit would have occurred resulting in total electrical failure, loss of fuel boost pumps, and possible double engine flameout due to fuel vaporization.

Lieutenant Holler's quick reactions and cautious approach to an unknown malfunction--one never before experienced in the F-15 community--prevented possible loss of a valuable combat aircraft. His exemplary airmanship and professionalism during this unusual and demanding situation qualify him as the TAC Aircrew of Distinction

chock talk

*...incidents and incidentals
with a maintenance slant.*

tank and left inboard pylon and MER. Luckily, no one was injured.

The safety officer arrived shortly thereafter and noticed that there weren't any safety pins installed in the equipment. Expanded carts were also found in the jettisoned items.

The safety pins had been removed at an unknown time by persons unknown, and the weapons crew admitted to not checking for the safety pins or the jettison carts.

000000PS !!

Four armament technicians were dispatched to the flight line to reconfigure two F-105s. The job on the first Thud went without a hitch. Two of the four technicians proceeded to the next airplane to install a multiple weapons pylon on the right inboard station.

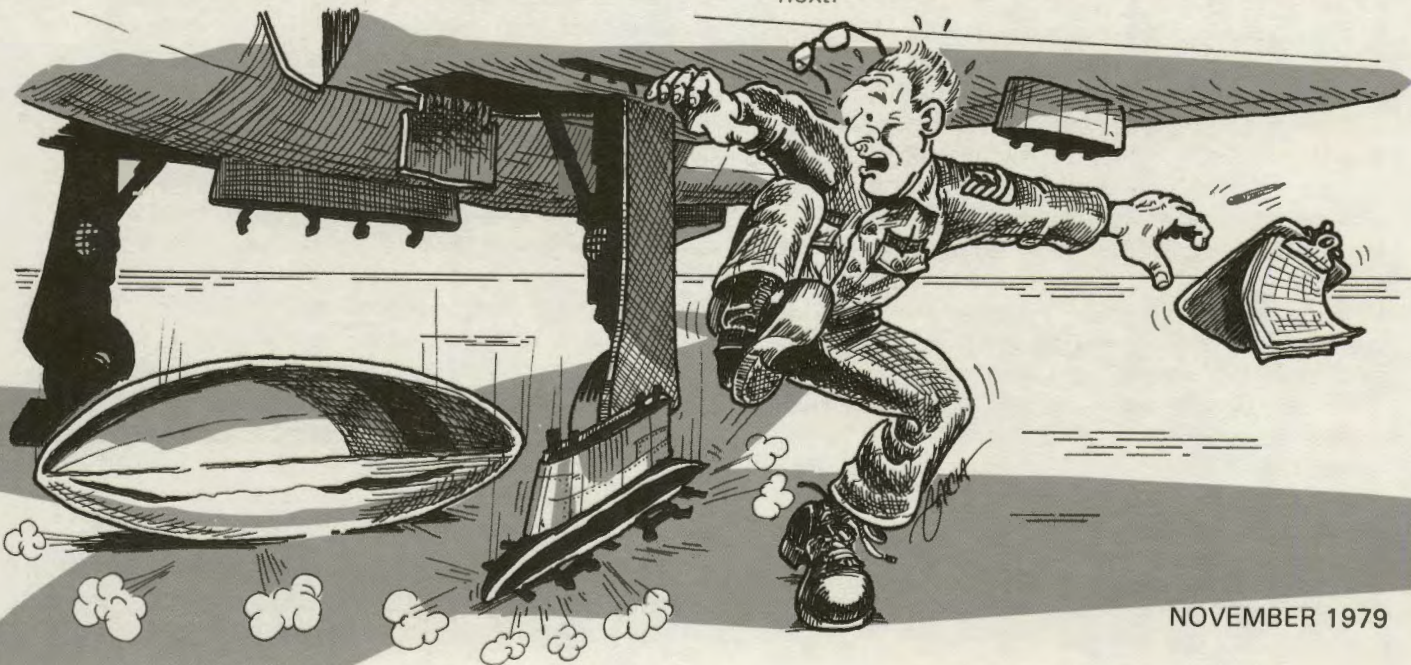
When their supervisor arrived, the pylon had already been hung and was ready for a continuity check on the jettison circuit. One of the technicians went to the cockpit while the supervisor stayed under the right wing with the test equipment. The supervisor directed the technician to hit the emergency jettison button--which he did, jettisoning the 650-gal centerline

I TOLD YOU SO

Two aircraft technicians were working on an A-10, replacing a TV monitor. The job proceeded uneventfully. A discussion then developed between the electrician and the crew chief concerning the aircraft fire extinguisher system.

The crew chief thought the aircraft fire extinguisher system could not be activated when the cockpit battery switch was in the off position. He then proceeded to prove it to the electrician. The crew chief then pulled the auxiliary power unit (APU) fire handle and activated the agent discharge switch.

Does anyone want to guess what happened next?



COLD WEATHER OPERATION ON THE FLIGHT LINE

Some of our bases feel the unfriendly blast of the north wind before others, all bases experience some cold weather during the winter. The weather variance--especially the large temperature changes--makes a big difference in personal performance, as well as the aircraft and supporting equipment. It's time to take stock and prepare now for the real battle with winter weather.

One of the first items we think of when we mention a change in climate is clothing. Here are a few things to keep in mind when "winterizing" yourself against cold weather.

Dead airspace makes insulation. The more layers of clothing, the more insulation. Several layers of clothing are better than one bulky thick layer.

The neck should be covered by either a loose fitting scarf, buttoned up coat collar, or turtle-



neck sweater.

Openings at the wrist, neck, ankles, and waist areas permit body heat to escape. Protect these areas.

A pair of loose fitting winter gloves provides more warmth than skintight gloves.

Your feet stay warmer if you wear a pair of light cotton socks under a pair of wool socks.

Other items also must be considered because of temperature changes . . .

Moving powered ground equipment requires more room for turning and stopping on ice and snow.

Greater attention must be given to the maintenance and inspection of such items as

static ports, vent lines, fuel drains, engine intakes, chock placement, etc.

Cold, dry air increases the problem of static electricity. Be extremely careful of this hazard while working around aircraft, explosives, or flammable liquids.

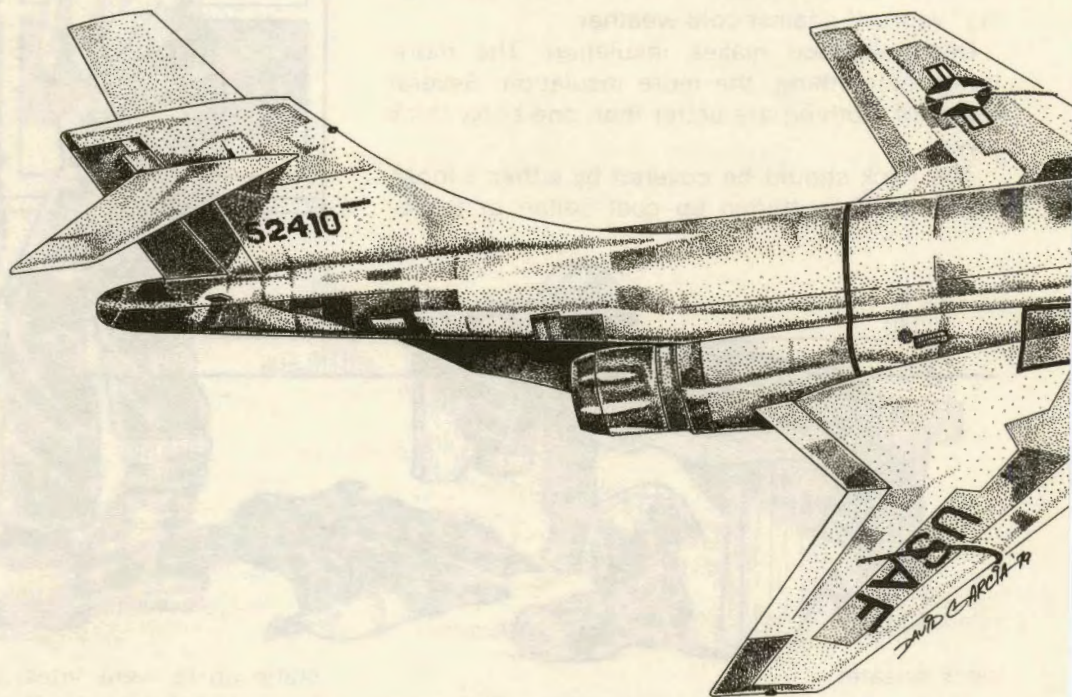
Keep fuel cells and tanks filled to reduce condensation.

Use extra caution when climbing ladders and walking on wings; slippery surfaces have resulted in many nasty falls.

A little preparation can make working on the flight line more tolerable during these cold months.

Good luck and think spring!

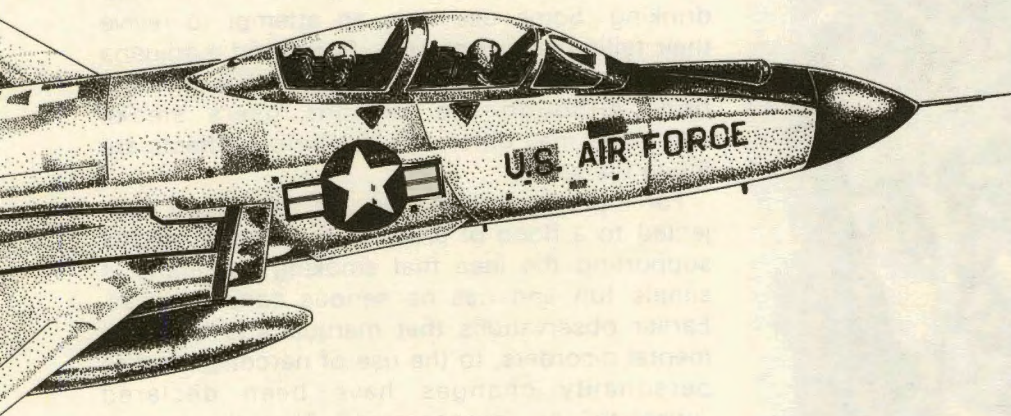
F-101 Voodoo



PROBLEMS TO ANTICIPATE WITH THE GROWTH OF MARIJUANA SMOKING

condensed from original article

By Martin B. Jones, Ph.D.
Senior Scientist, University of California



PROBLEMS TO ANTICIPATE WITH THE GROWTH OF MARIJUANA SMOKING

condensed from original article

By Hardin B. Jones, Ph.D.

Senior Scientist, University of California

Today, many adults smoke marijuana. Some start using marijuana to help themselves stop drinking. Some use it in an attempt to revive their failing sexual powers. Some find marijuana a substitute for tranquilizers or other medication. Although the reasons users smoke marijuana may differ, the deleterious effects are much the same.

For more than a decade, we have been subjected to a flood of articles, books, and reports supporting the idea that smoking marijuana is simple fun and has no serious consequences. Earlier observations that marijuana is linked to mental disorders, to the use of narcotics, and to personality changes have been declared "obsolete" or "exaggerated." That these early observations are now supported by scientific studies and that many of the early studies were carefully conducted have been ignored.

There are problems with many of the reports supporting the harmlessness of marijuana. First, examinations of marijuana smokers early in their use do not reveal the long-range effects. Second, as marijuana causes adverse behavioral changes that the user cannot recognize in himself, some investigators may have been deceived by their own experiences with the drug. Because they cannot feel the ill effects themselves, many investigators have assumed that marijuana would turn out to be as free of long-term effects as most well-tested medicines.

Marijuana is an unusual drug in that the active ingredient, tetrahydrocannabinol (THC), is retained in the body for long periods of time. One study, conducted by Louis Lemberger of the



Indiana University School of Medicine, has indicated 30 percent of the THC is retained in the body at the end of a week. Similar retention occurs whether the users are heavily or lightly exposed to marijuana. With repeated exposure, THC accumulates in the body.

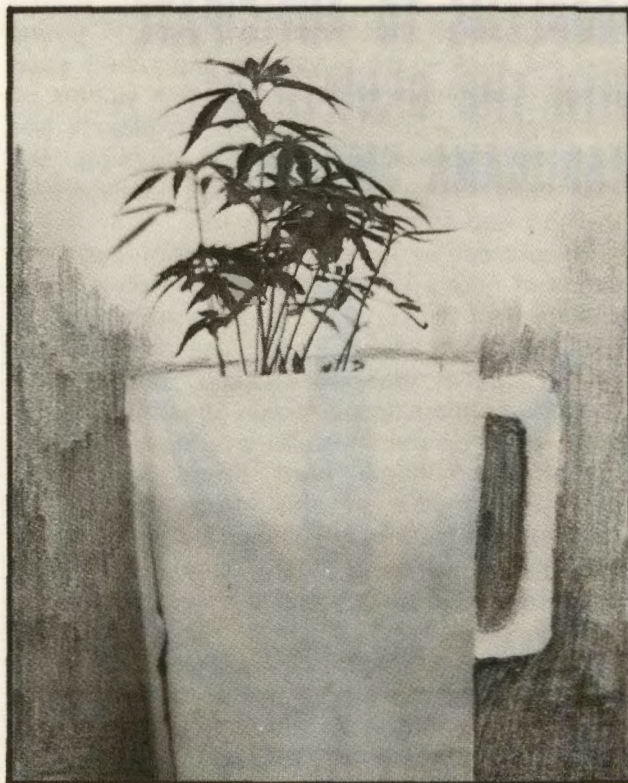
THC is changed only slightly by metabolism. In this process, some is converted to a more psychoactive form. (There are about fifty cannabinoids in marijuana; those that have been studied retain their basic cannabinoid structure and fat solubility even though partly altered by metabolism.) THC is highly fat soluble and is, therefore, deposited in the fatty outer membrane of cells. THC appears to have adverse effects on all body cells, but there is reason to be especially concerned about its effects on brain cells and on the reproductive process.

An important source for information on the toxic effects of THC on cells is the report of a symposium on marijuana presented at the Sixth International Congress of Pharmacology held in Helsinki in 1975.

More recently W.D.M. Paton, Professor of Pharmacology at Oxford, and Robert G. Heath, Chairman of the Department of Psychiatry and Neurology at Tulane University, and their colleagues have shown the profound changes that occur in the surface membranes of brain cells in animals exposed to doses of marijuana within the range of typical human doses. Changes have been found to occur in the membrane of brain cells, red and white blood cells, liver and lung cells, and sperm.

Marijuana appears to injure the fine, hairlike extensions of the brain cell membranes that communicate with the other brain cells. Such damage is critical, for although each cell has tens of thousands of these connectors, the brain needs them all. They are the mechanisms of the mind.

That marijuana can cause brain damage has recently been confirmed by Robert G. Heath. In his study, Heath exposed monkeys for six months to doses of marijuana corresponding to moderate and heavy human doses. Before the brains of the monkeys were examined, they were taken off marijuana for eight months. The site and degree of brain atrophy in the monkeys were similar to those in the young men in the Campbell study.¹ Heath also examined the hairlike extensions of the brain cell membranes and



found that these synaptic structures were also altered.

Two major studies have shown genetic and developmental damage in laboratory rodents after exposure to marijuana. One unpublished study, conducted by de Paul Lynch of Saint John's University, New York, examined the transmission of defects to succeeding generations. Excessive abnormalities appeared in two generations after exposure of the original animals. In this instance only two generations were studied. The other study conducted by Peter Fried of Carlton University, Canada, establishes a variety of genetic changes in offspring of rats exposed to marijuana. Developmental abnormalities were found to be equally frequent after the exposure of either male or female parents.

There are indications that the risks involved with "normal" marijuana use probably exceed the genetic risks associated with exposure to sub-lethal levels of radiation.

The correlation between cigarette smoking and lung cancer, emphysema, and other respiratory problems is well known. Emphysema is

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found in 52 percent of those who smoke more than a pack of cigarettes a day; only 3 percent of nonsmokers develop emphysema. The death rate among cigarette smokers exceeds that of nonsmokers by 83 percent.

Tobacco smoking diminishes lung capacity. The amount of oxygen transported in the blood is decreased when some hemoglobin unites with molecules of carbon monoxide rather than oxygen. In addition, the lungs are irritated by the smoke and become inflamed.

With marijuana, because fewer cigarettes are smoked, less carbon monoxide is taken up in the blood. However, the lungs of the marijuana smoker become more irritated than those of the tobacco smoker. The irritation is greater because THC is more tightly bound to the carbon particles in the smoke than nicotine is; and, in order to get an effect, the marijuana smoker must inhale deeply and hold the smoke in his lungs. After even a short period of exposure, as the carbon particles accumulate, the lungs of the marijuana smoker change permanently from pink to black.

Marijuana is often said to be like alcohol, but

the two drugs are not at all alike. THC, the principal active ingredient in marijuana, is highly soluble in fat and insoluble in water. THC remains in the fatty structures of cells for long periods and, with repeated use, accumulates there. Alcohol is a water-soluble food and is metabolized to provide cell energy. It leaves the body rapidly and completely. There is no residue.

Molecule for molecule, THC is 10,000 times stronger than alcohol in its ability to produce mild intoxication. For example, one drink containing 10 grams of ethyl alcohol is metabolized in an average-sized person in about one hour into carbon dioxide, water, and acetone; 50 grams of alcohol produces mild intoxication and is metabolized in about five hours. Only 5 milligrams (0.005 gram) of THC are required to produce the same degree of intoxication. THC is removed slowly from the body, and many months are required to recover from its effects. The marijuana user is under the influence of the drug even between highs.

It takes decades for irreversible brain changes to appear in the heavy drinker. In the marijuana smoker, irreversible brain changes may appear within three years. Comparing alcohol and cannabis, W. D. M. Paton, Professor of Pharmacology, Oxford University, said: "The price (in health) for (marijuana) overuse is paid in adolescence or in early life; the price for alcohol overuse is paid in later life."

Along with cancer and cardiovascular disease, which are linked to cigarette smoking, alcoholism is another of the major health problems of this country. With the increasing use of marijuana, another major health problem has now been added. The problem is increased when marijuana is used with alcohol, as it often is. The two drugs in combination have a greater effect than the sum of their individual effects.

Contrary to many reports and popular belief, marijuana is chemically addictive. It is addictive because the user can develop tolerance to its effects and suffers withdrawal symptoms when he abstains. The withdrawal symptoms are mild, so mild, in fact, that until recently they were not recognized as withdrawal symptoms. The mild symptoms include irritability, restlessness, and sleeplessness. More intense withdrawal symptoms have been observed in persons exposed for a few weeks to high doses of THC:

restlessness, sleeplessness, rapid onset of irritability, loss of weight, nausea and vomiting, diarrhea, salivation, sweating, hot flashes, runny nose, hiccups, and electroencephalographic changes during sleep.

The mildness of the marijuana withdrawal symptoms is explained by the fact that THC accumulates and is retained in the brain and body fat. Other sensual drugs that are not stored in the body produce more marked withdrawal symptoms.

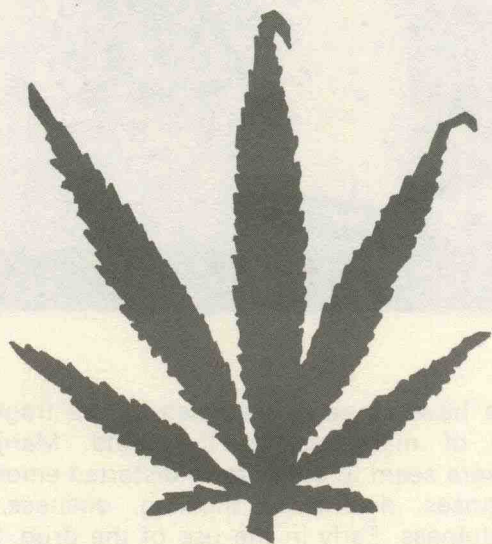


We have all seen examples of the tragic effects of marijuana on the mind. Marijuana smokers seem to suffer from distorted emotional responses, disordered thinking, dullness, and slothfulness. Early in the use of the drug, these behavioral changes appear to be reversible, but as exposure continues, recovery is less and less complete. Those most severely affected are usually not employed. There are, however, many marijuana users in factories and offices who appear to be normal but who suffer chronically from an altered judgment that may affect the quality of their work.

The most extensive study of the lingering effect of the hemp drugs was conducted at the request of the Egyptian government by Professor Soueif. Over a period of 25 years, he observed 850 cases of hemp-drug users, which he matched against control cases. Both the users and the controls were given standardized tests of mental function. The tests showed that "those with a higher level of education--and/or intelligence--show the largest amount of deterioration from marijuana use." It appears that the cumulative detrimental changes induced by marijuana result in impaired judgment and a diminished capacity to take responsibility.

Marijuana has an adverse effect on the performance of high-level jobs. The user is frequently lethargic, lacks motivation, is prone to error, has trouble remembering important details, and cannot think practically about the future. These transformations are gradual and are not marked by the obvious signs of impaired ability; it is

PROBLEMS TO ANTICIPATE WITH THE GROWTH OF MARIJUANA SMOKING



easy to spot the alcoholic, but not so easy to spot the marijuana user.

Studies of the influence of marijuana on drivers have shown that marijuana impairs judgment and reduces the driver's ability to gauge distance, speed, and road conditions. The severely altered behavior typical of the chronic marijuana user suggests that driving performance would be impaired even between uses: the user is never free from the burden of the active material.

There are other reasons for believing that the judgement of marijuana smokers is impaired. Marijuana users often accept the use of LSD, heroin, or cocaine, while the nonusers reject these more powerful drugs. The adverse effects of marijuana ranks next to the adverse effects of opiates as the reason given for admission to federally financed treatment centers. Marijuana use interferes with practical success and produces alienation, sometimes mild, but sometimes severe enough to be called paranoia.

The belief that marijuana is safe has become so entrenched that the steadily mounting proofs

of its dangers are ignored. The political movement to "decriminalize" (legalize) marijuana has distracted attention from the health hazards. There are those in government, education, and science who have chosen to cope with the marijuana problem by making light of it or by condoning the use of the drug. For example, the following statement was treated merely as a footnote in the 1976 Annual Report to the President by the Domestic Council Drug Abuse Task Force:

"Recent research indicated that marijuana is far from harmless, and . . . chronic use can produce adverse psychological and physiological effects. Therefore, its use should be strongly discouraged as a matter of national policy."

When such statements as this are buried in footnotes, it is easy to see why people become confused.

I believe that if people know the evidence indicating the real dangers of marijuana, they will be discouraged from using it. In my teaching of drug abuse courses at the University of California, and in my counseling around the world, I have found that by explaining how the brain functions and how marijuana affects this functioning, I was able to help people stop using the drug and to keep others from experimenting. They are usually surprised to learn that these effects occur in the brain and that, although fascinating, they are indications of disturbed brain function.

Our thoughts and perceptions as normal persons cannot be improved by drugs. All that we are is in the interactions of our brain cells. With this understanding of how our brains work, the false notion that the mind is expanded by drugs can be replaced by a more profound appreciation of the complexity of our being. ➤

The late A.M.G. Cambell of the Department of Neurology, Bristol University, conducted a study of ten consecutive cases of young marijuana users who showed marked behavioral changes. X-ray examinations of their brains revealed that they all suffered from cerebral atrophy. The degree of atrophy correlated with the duration of marijuana use.

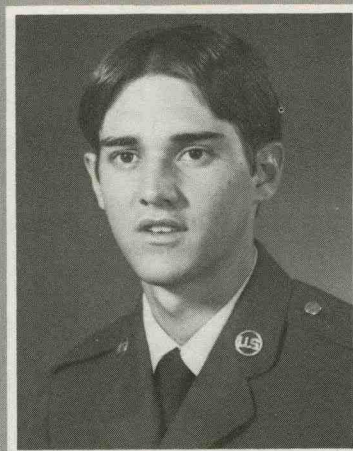


TAC

SAFETY AWARDS

INDIVIDUAL SAFETY AWARD

Airman First Class Steven F. Labonte, 355th Component Repair Squadron, 355th Tactical Training Wing, Davis-Monthan Air Force Base, Arizona, is the recipient of the Tactical Air Command Individual Safety Award for November 1979. Airman Labonte's safety consciousness is evident in his initiation of an intensive inspection of electrical mockups that had been relocated within the Comm-Nav shop. During this inspection he identified and corrected several major safety discrepancies. In addition, his active interest in all aspects of the safety program has created a safer environment for himself and his co-workers.



A1C Steven F. Labonte

CREW CHIEF SAFETY AWARD

Staff Sergeant Larry E. Oehm, 49th Aircraft Generation Squadron, 49th Tactical Fighter Wing, Holloman Air Force Base, New Mexico, is the recipient of the Tactical Air Command Crew Chief Safety Award for November 1979. Sergeant Oehm's superior performance and rigid adherence to safety practices in all aspects of his job are commendable. His thoroughness and technical ability are evident in the exemplary manner in which he maintains his aircraft. He continually provides pilots of the 49th Tactical Fighter Wing with safe, mission capable aircraft.



SSgt Larry E. Oehm

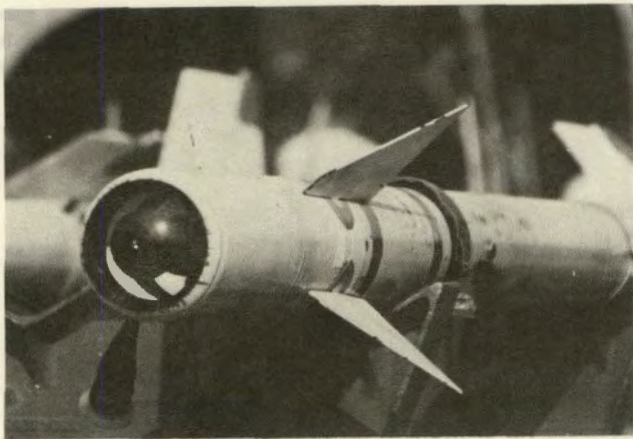
WEAPONS WORDS

AIM-9 BLOTTER

By Maj Fred Higaki
HQ TAC/SEW

Over the past eight months we've abused AIM-9s in almost every imaginable way. The following is the hit list of TAC AIM-9s maimed or killed from 1 January - 31 August 1979:

Victim	Date of Occurrence	Injuries	Circumstances
1. AIM-9B	15 Jan 79	Broken Umbilical Block	Hit and Run, Person/Persons Unknown
2. AIM-9E	16 Jan 79	Blown Gas Grain Generator	Prophylactic Adapter Removed by Person/Persons Unknown
3. AIM-9E	12 Feb 79	Broken Umbilical Block	Hit and Run, Person/Persons Unknown
4. AIM-9E	2 Mar 79	Broken Seeker Head (IR Dome)	Hit and Run, Person/Persons Unknown
5. AIM-9E	12 Mar 79	Broken Seeker Head (IR Dome)	Bludgeoned by Cockpit Access Ladder
6. AIM-9J	27 Mar 79	Fatal	Departed for Undetermined Reason; Possible Suicide due to Fatigue
7. AIM-9P	17 Apr 79	Broken Seeker Head (IR Dome)	Dropped on Head While Being Manhandled
8. AIM-9P	21 Apr 79	Broken Seeker Head (IR Dome)	Pelted by Heavy Precipitation
9. AIM-9E	11 May 79	Broken Seeker Head (IR Dome)	Hit and Run, Person/Persons Unknown
10. AIM-9J-1	14 May 79	Broken Seeker Head (IR Dome)	Battering Ram Contest With a Bug, Bug and Missile Lost
11. AIM-9J	23 May 79	Rear Hanger Separated from Inert Motor (MK 17)	Pulled Apart by High "G" Loads/Fatigue
12. AIM-9J	1 Jun 79	Fatal	Fatigue/Shear Overload of Launcher Mounting Bolt
13. AIM-9L	4 Jun 79	Blown Gas Grain Generator	Prophylactic Adapter Removed by Person/Persons Unknown
14. AIM-9P	2 Jul 79	Blown Gas Grain Generator	Shorted by Painted Contacts
15. AIM-9E	27 Jul 79	Blown Gas Grain Generator	Pilot Accepted Victim Without Prophylactic Adapter Installed
16. AIM-9P	8 Aug 79	Broken Seeker Head (IR Dome)	Suspected Collision With Bug
17. AIM-9E	14 Aug 79	Blown Gas Grain Generator	Prophylactic Adapter not Used
18. AIM-9P	24 Aug 79	Broken Seeker Head (IR Dome)	Hit and Run, Person/Persons Unknown



Victim's affiliation with specific organizations has been omitted to protect the innocent and promote rehabilitation of those victimized.

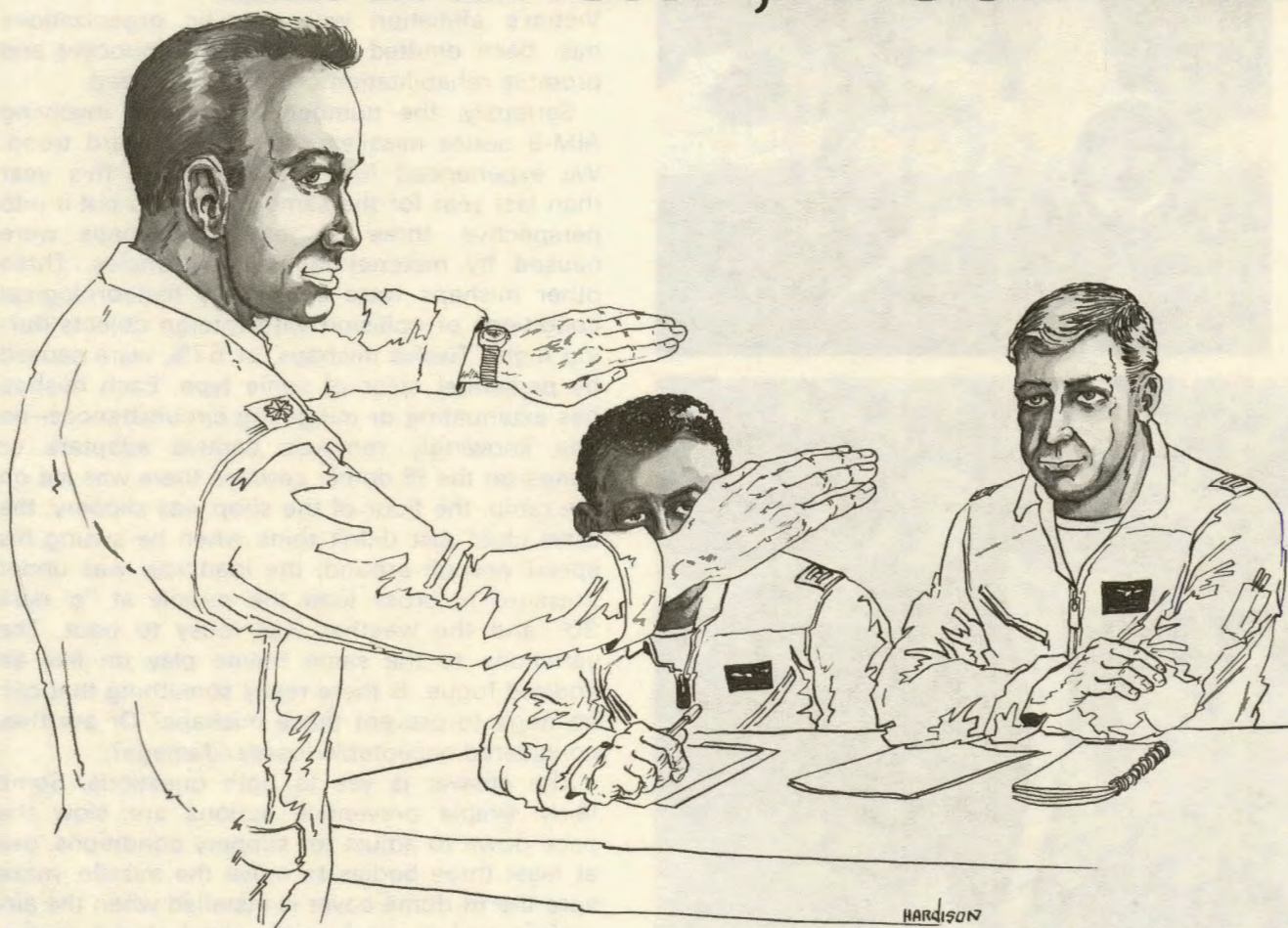
Seriously, the number of mishaps involving AIM-9 series missiles shows an upward trend. We experienced four more mishaps this year than last year for the same period. To put it into perspective, three of the 18 mishaps were caused by materiel failure/deficiencies. Three other mishaps were caused by meteorological conditions or collision with foreign objects during flight. Twelve mishaps, or 67%, were caused by personnel error of some type. Each mishap has extenuating or mitigating circumstances--no one knowingly removes captive adapters or bangs on the IR dome; perhaps there was ice on the ramp; the floor of the shop was slippery; the crew chief just didn't think when he swung his speed wrench around; the loadcrew was under pressure to cross load the missile at "o' dark 30" and the weather was lousy to boot. The variations to the same theme play on like an endless fugue. Is there really something that can be done to prevent those mishaps? Or are they considered acceptable losses/damage?

The answer is yes to both questions. Some fairly simple preventive actions are: slow the pace down to adjust for slippery conditions, use at least three bodies to move the missile, make sure the IR dome cover is installed when the aircraft is parked, and visibly check that a captive adapter is installed. Do these even though the missile shop has not sent a captive AIM-9 out without one installed for the past three months; even when we're only crossloading the missile which supposedly worked fine the other day; even though crew #4 always loads their ammo right; and even when it's dark, wet, and the line supervisor is on your "you know what."

On the other side of the coin, there are times when mishaps can be taken as acceptable losses. Examples are: (1) running into big, hard bugs during flight, (2) running into weather phenomenon unexpectedly or as necessary to recover or maintain safety of flight, and (3) losses due to materiel deficiencies which identify problem areas not previously identified and which can then be corrected by engineering or procedural fix.

Tell us what you think about the preventive effort. Is it worth it in terms of time and money? Any ideas?

LEADERSHIP, DISCIPLINE,



By Colonel Robert D. Anderson
HQ TAC/DOO

As we examine the degree of readiness TAC has recently achieved, we can be proud of our achievements. We are able to surge and fly more sorties than were ever envisioned several years ago. Our professional munitions crews can load-out our "birds" in record time while overcoming countless obstacles such as adverse weather, airplanes "breaking," delays in getting necessary parts, and many other factors. Our aircrews have developed delivery techniques resulting in more accurate bomb deliveries. Realistic air-to-air training increased the numbers of "kills" of simulated enemy aircraft. There is no question we are ready to fight and win.

Reaching this high state of readiness has not

been easy. Units have spent many hours training at their home stations. Red Flag exercises, deployments to planned operating locations, composite force training, and joint Army/Air Force exercises all play an integral role in this improved training. Unfortunately, our advances have not always had positive aspects.

From August 1978 to July 1979, we lost 26 aircrew members from the TAC active force. Thirty-eight combat aircraft were lost during this same period. The dollars and cents figures of our losses, while staggering, are somewhat meaningless. While some of our aircraft cannot be replaced, our aircrew members are priceless. It is impossible to replace a pilot or WSO with 2,000+ hours flying time, a decade of flying experience, and one or two combat tours. The real tragedy of our mishaps is that operational factors were involved in 27 of these accidents--

AIRMANSHIP

factors over which you and I and the aircrews had control.

These factors can be categorized into three broad areas--leadership, discipline, and basic airmanship. Flight leaders who failed to fully realize or accept their responsibilities, breakdowns of individual and/or flight discipline, and a seeming lack of basic flying skills were causal or contributing factors in 92% of the aircraft losses. Can we do anything to reduce this need-less loss?

I believe we can indeed cut our losses. Not only can we reduce them, it is imperative that we do. To that end, I've written a series of articles covering these areas, hoping that they will serve as thought-provoking material for our aircrews. They will appear in succeeding issues of TAC ATTACK. This month, let's talk about flight leaders and tactical aviation.

• • •

We have all flown with different flight leaders who possessed a variety of capabilities. Some exercised strong control of the entire mission, while others were loose in many respects. We have come a long way from the "light on the star, two, bingo, and mayday" days of operation. But one fact remains, the flight leader is in charge. He's the one running the show and the one responsible for the overall success of his flight. Let's take a look at what can happen when the man in charge doesn't fulfill his responsibilities . . .

- A flight of two aircraft elected to make a VFR recovery in marginal weather over mountainous terrain. While attempting to maintain VMC, the flight entered a steep dive from which they never pulled out.

- During an exercise mission, the flight leader failed to fully brief formation procedures and contingencies. An unbriefed maneuver led to a loss of flight integrity and a midair collision.

There are other examples of a breakdown in leadership, but I won't take your time to discuss them. I could also spend a great deal of energy listing the traits of a good leader, but these characteristics should all be evident to anyone who has been in tactical aviation for any length of time. Basically, flight leadership can be broken down into two principles: accomplish the mission and bring your wingman home.

The key to accomplishing both of these objectives is planning. The planning that should take place before the mission--the type of planning where the leader and his flight members analyze the mission, target, defenses, and numerous other contingencies before deciding just how the mission will be flown. If the planning is done properly, the execution is easy.

Our job in TAC is the selective application of tactical airpower. You as present or future flight leads are key figures in that mission. You determine how a target should be attacked based on your time over target, ordnance utilized, target defenses and other considerations. You must also analyze your capabilities and the capabilities of your flight members and take care not to exceed them. You might as well have stayed on the ground if you lose one or two flight members on ingress and end up missing the target or only damaging it, because you or someone else will have to go back to the target again.

Furthermore, the mission isn't complete until you're back home on the ground. Whether you're on a local training mission, cross country, exercise or in combat, your second task is to bring your flight home. As I stated in the previous paragraph, if you don't exceed the capabilities of your wingmen, they should make it through the mission--every mission. One of the Japanese aces of WWII when asked what he deemed his greatest accomplishment did not speak of his air-to-air victories but simply stated that during the war he never lost a wingman.

How good a leader are you? How well do you handle your flight? What can you do to be more effective? An introspective examination of your capabilities using questions like these can help you improve and be as effective as possible. We can't all be flight leads, but we want every leader we have to be a good leader--one that will make the difference between mission success or failure. Your hard work can make our missions more effective and reduce our aircraft mishaps at the same time.

Next month we'll talk about aircrew discipline.



Colonel Robert D. Anderson, Director of Fighter/Reconnaissance Operations at Headquarters TAC, has had a long and distinguished career in tactical fighters. His initial assignment was in F-84s at Taegu, Korea, where he flew 100 combat missions. His other assignments include a tour with the Thunderbirds, two stints in SEA with a MIG-21 to his credit, and command of the 20 TFW (USAFE).

A CREW CHIEF

By SSgt Gary Martin
388 TFW

It was one o'clock in the morning,
The rain was cold as hell,
Should I pencil whip this preflight?
No one could ever tell.

I'll slide on down the intake,
To give those blades a check.
The first stage has a couple of nicks,
But it's late, so what the heck.

I put a gage on the tires,
They're low and soft as toffee,
I'll give them a shot of air later on,
I need a cup of coffee.



I've got a leak in the right gear well,
I saw it just by chance,
I'll check it when we crank her up,
I'll give it one more glance.

So I looked the rest of her over,
And wiped off a leak on the wing,
The aircrew made the walk-around,
They didn't notice a thing.

We got both engines turning,
Oil's low on number one.
Give me a "red ball" expediter,
And get them on the run.

I pop a salute as she rolls out,
I make it sharp and snappy.
The GIB smiles and holds up his thumb,
Man they sure look happy.

She rolled onto the taxiway,
I rubbed my hand on the wingtip.
Everything is looking good,
I'll catch her after the trip.

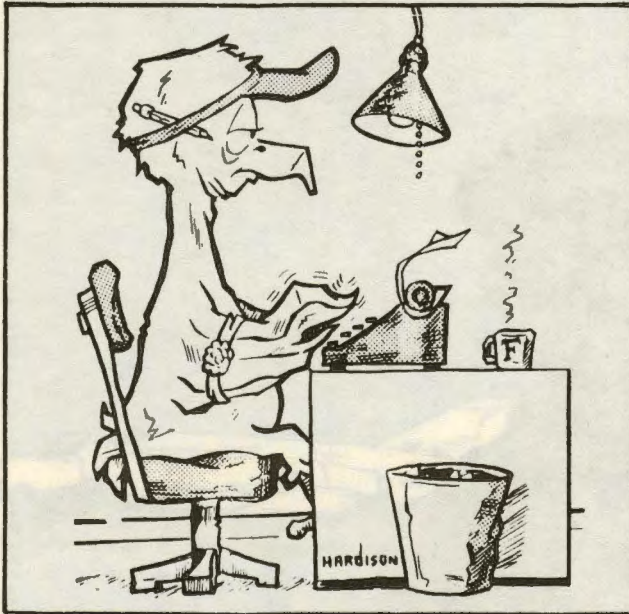
I see her rolling down the strip,
From the corner of my eye,
The nose is starting to come up,
But look at those sparks fly.



Looks like the engine's come unglued,
The pilot's sure trying to stop her,
The hook's been dropped, but she's off the
runway,
I hope they miss that bunker.

The aircrew made it out alright,
Which helped my conscience a bunch,
But I never will forget that day,
That I bought an aircraft's crunch.

LETTERS



© Stan Hardison, 1977

Dear Editor,

I just finished reading "Mission or Safety . . . or Both" in the September 1979 TAC ATTACK.

For many years, we in the EOD career field have handled the BDU 33 and MK 106, both on and off the bombing range, in the unfired, fired, and dudfired condition. It is always unfortunate to read of accidents where a fellow airman has been senselessly injured by a "practice" bomb. Carelessness is most always involved; drop the bomb and it will function. After all, the Air Force spends lots of money developing bombs that do function as designed.

The signal contains red phosphorus, no less hazardous than the white phosphorus mentioned in the article, but the reference to the small charge is innocently misleading. The expelling charge consists of three grams of smokeless powder, which figures to be better than 46 grains of powder. When compared to the less than 30 grains found in a magnum shotgun load, this amount takes meaning. Maybe a change in the designation to "Bomb, Spotted" would bring this hazard to the minds of routine handlers of these bombs.

I wonder how many 46XXX's have seen the MK 4 signal function. An accidental firing is much too strong a lesson to teach the effects of a functioning

signal. A controlled functioning within safety parameters is possible and would be beneficial to personnel who handle these bombs. Surely the wing commanders would agree to a demonstration which would instill respect for these bombs.

TSgt Norbert J. McNally
58 TTW/MAECE
Luke AFB, AZ

Dear TSgt McNally,

Thanks for the letter and the information. Hopefully, our readers who handle BDU 33 and MK 106 amunitions will realize the potent force contained in the explosive power.

Your suggestion concerning the MK 4 signal demonstration locally has merit, and I'll pass the suggestion on to the appropriate people here at the headquarters. Meanwhile, why not suggest that such a demonstration be conducted at your unit?

Ed

• • •

Dear Editor,

The article, Risk Assessment, by Major Alan Reid, in your August issue has very good intent. Something is definitely needed to help reduce accidents--in all services. Major Reid's ideas are sound and worth exploring. I know in Naval Aviation, steps are being taken somewhat along the lines of Major Reid's. For instance, if a pilot hasn't flown at night in a couple of weeks, squadron ops officers don't schedule him for a night, low-level ordnance delivery hop until he has had a recent night fam/instrument type hop. It's definitely a tough job for the operations people to stay on top of, but a job that's a must if we in aviation are to eliminate accidents--particularly the un-called for mishaps.

Like the automobile ad says, "...a better idea!", and it appears that Major Reid has one. I, for one, hope it works. Good luck!

Joe Homer
Fixed-wing Writer
APPROACH

Dear Mr. Homer,

Thanks for the letter. I expected an uproar from the operations troops accusing Major Reid of heresy. Yours was the only letter I received on the subject. Hopefully, the article has provoked some thought in all our aircrews.

Ed

TAC TALLY



CLASS A MISHAPS	➡
AIRCREW FATALITIES	➡
TOTAL EJECTIONS	➡
SUCCESSFUL EJECTIONS	➡

TAC		
SEP	THRU	SEP
	1979	1978
6	32	25
2	25	17
5	34	27
4	21	21

ANG		
SEP	THRU	SEP
	1979	1978
0	6	11
0	5	9
0	4	5
0	2	4

AFR		
SEP	THRU	SEP
	1979	1978
0	3	2
0	2	0
0	3	2
0	1	2

TAC'S TOP 5 thru SEPTEMBER '79



TAC FTR/RECCE	
class A mishap free months	
33	347 TFW
20	479 TTW
19	33 TFW
12	1 TFW
11	31 TFW

TAC AIR DEFENSE	
class A mishap free months	
94	84 FIS
80	57 FIS
33	5 FIS
30	48 FIS
16	318 FIS

TAC GAINED FTR/RECCE		
class A mishap free months		
56	156 TFG	(ANG)
37	184 TFTG	(ANG)
36	123 TRW	(ANG)
21	121 TFW	(ANG)
21	108 TFW	(ANG)

TAC GAINED AIR DEFENSE		
class A mishap free months		
86	191 FIG	(ANG)
67	102 FIG	(ANG)
63	177 FIG	(ANG)
42	158 DSEG	(ANG)
29	125 FIG	(ANG)

TAC/GAINED Other Units		
class A mishap free months		
115	193 TEWG	(ANG)
102	USAFTAWC	(TAC)
98	919 SOG	(AFR)
90	105 TASG	(ANG)
71	1 SOW	(TAC)

CLASS A MISHAP COMPARISON RATE 78/79

(BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)

TAC	1978	16.0	12.4	8.3	7.5	5.8	6.3	6.1	6.7	6.5			
	1979	6.9	7.0	5.9	6.6	7.4	6.2	7.2	7.1	7.7			
ANG	1978	0	3.4	4.0	5.9	8.1	7.4	7.9	6.9	6.7			
	1979	0	11.4	9.0	9.7	7.6	6.2	5.4	4.6	4.1			
AFR	1978	0	0	10.9	7.8	6.0	4.8	8.1	7.1	6.3			
	1979	0	0	19.9	23.1	17.0	13.4	11.6	9.9	8.8			

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

**BOMBS
ARE SMARTER
THAN PILOTS...**

**they always know
where the ground is.**

